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Special Contributions.

Ornamental Trees.

BY JOSIAH HOOPES.

AS every planting season approaches, the all-important topic among owners of new places is, what shall we plant? At first thought, this question seems to be of easy solution; but the more we inquire into the details of landscape art, the more difficult it becomes to settle upon the proper list of trees embracing all the requisites of beauty, and yet be adapted to our especial situation. To name a list that would suit all our readers, residing thousands of miles apart, would be simply preposterous; but to suggest a happy medium, one combining very many excellencies, and reliable generally in the Middle States, is not so difficult. We therefore purpose, in the following selections, to place before our tree planters such species and varieties as are generally admired and are satisfactory, so that any one can choose according to his fancy, and what, in his own judgment, would be best adapted to his particular location.

Among large-sized deciduous trees, we would select the following twelve as unexceptionable, viz.: Acer platanoides (Norway Maple), A. saccharinum (Sugar Maple), Æsculus Hippocastanum (common Horse Chestnut), Fagus sylvatica (common European Beech), or either of its two beautiful varieties, purpurea and pendula; Larix Europea (European Larch), Liquidamber styraciflua (Sweet Gum), Liriodendron tulipifera (Tulip Tree), Magnolia acuminata (Cucumber Tree), Nyssa multiflora (Sour Gum), Quercus alba (White Oak), Taxodium distichum (Bald or Deciduous Cypress), and Tilia Americana (American Linden). It will be noticed that we have omitted several excellent species that succeed in many sections of the country; but we are forced to draw the line somewhere, and therefore such valuable trees as the American Elm, etc., have been disregarded, but all for some satisfactory reason. For instance, the foliage of the Elm is frequently destroyed by insects; the *burs* of the common Chestnut are very annoying on the lawn, etc.

We would suggest as twelve excellent medium-sized deciduous trees, the following, viz.:

Acer campestre (Cork-barked or English Maple), A. rubrum (Red or Scarlet Maple), Betula alba (White Birch), Fagus sylvatica var. heterophylla (Fern-leaved Beech), Halesia tetraptera (Snow-drop Tree), Magnolia umbrella (tripetela) (Umbrella Tree), M. conspicua (Yulan Magnolia), M. Soulangiana (Soulange's Purple Magnolia), Prunus padus (European Bird Cherry), Salisburia adiantifolia (Japan Ginkgo), Quercus Phellos (Willow Oak), and Tilia alba (White-leaved Linden). The Mountain Ash and common Ash are omitted on account of the attacks of the "borer;" the Thorns, because they are liable to blight; Magnolia macrophylla, as it is not reliable much further north than Philadelphia, etc.

For twelve small-sized deciduous trees we name Asimina triloba (Papaw), Cercis Canadensis (American Judas Tree), Chionanthus Virginica (White Fringe Tree), Cladrastis tinctoria (syn. Virgilia lutea) (Yellow Wood), Cytisus Laburnum (Golden Chain), Magnolia cordata (Heart-leaved Magnolia), M. glauca (Sweet Bay), M. Lennei (Red-flowering Magnolia), Rhus cotinus (Purple Mist Tree), Cornus florida (Large White-flowering Dogwood), Tamarix tetandra (Slender Tamarisk), and Viburnum opulus (Cranberry Tree), or, if preferred, var. sterilis (Snowball).

In Conifers, from medium to large size, we should designate as very valuable the following twelve reliable kinds, viz.: Abies alba (White Spruce), A. excelsa (Norway Spruce), A. obovata (or A. orientalis, very similar) (Obovate-coned Spruce), A. Canadensis (Hemlock Spruce), A. Nordmanniana (Nordmann's Fir), A. Pichta (Siberian Fir), Pinus Austriaca (Austrian Pine), P. cembra (Swiss Stone Pine), P. strobus (White Pine), Retinispora obtusa (Obtuse-leaved Retinispora), Thuja occidentalis (American Arbor Vitæ), and the var. Siberica (Siberian Arbor Vitæ).

Among small-sized Conifers, where the varieties are so numerous, it becomes a difficult task to select a list without doing injustice to a large number of excellent kinds; but the following will all give entire satisfaction in the majority of situations: Abies excelsa Gregoryana (Gregory's Dwarf Spruce), A. Fraseri Hudsonica (Hudson Bay Fir), Biota orientalis elegantissima (Rollinson's Golden Arbor Vitæ), Juniperus communis Alpina (Canadensis) (Canadian Trailing Juniper), Pinus mugho (Dwarf Mugho Pine), Podocarpus Japonica (Japan Podocarpus), Retinispora plumosa (Plume-like Retinispora, var. Aurea, Golden Retinispora), Taxus adpressa (Japan Yew), T. baccata, var. Canadensis (American Yew), Thuja occidentalis globosa (Globe-headed Arbor Vitæ), and var. Hoveyi (Hovey's Golden Arbor Vitæ).

Having settled upon our list of trees to plant, the next question that arises is, how to perform the operation so that the best results may be obtained. Experienced planters entertain different opinions upon various points, but all mostly agree upon the essential features, so that a few general hints to the uninitiated may perhaps meet the views of both teachers and pupils. Dig the holes large in diameter, but not in depth, as we should desire to encourage the feeding roots to grow near the surface, whilst the long tap-roots will find their way down fast enough. Never allow the tree to be exposed to high winds, nor to the hot sun. Our plan is to keep the roots covered with old carpet or matting until set in its position; sprinkling with water occasionally at such times is highly beneficial.

Soil taken from the excavation may not be suitable for hastening root formation; therefore always have a supply of old fibrous loam, taken from a fence row, where the accumulation of decayed vegetable matter has been going on for years. This makes an unexciteable, yet grateful food for plants. Do not, upon any account, hurry the job, but throw, or rather sprinkle the soil among the roots, taking care to work it in well with the best of all tools for this purpose—the hands, and pour in a little water as the work progresses.

The oft-quoted maxim of the lamented Downing, that "many persons plant a tree as they would a post," contains a slight taste of good advice beneath the exterior of irony, as now-a-days some of our most successful cultivators believe that ramming the soil around a

newly planted tree is a great point gained, and that a tree so managed stands a greater chance of living than when set in the ordinary way, with merely loose soil around its roots. After planting, especially if in autumn, it must be staked and mulched. Various methods have been suggested at different times for staking trees, but we have never observed any plan that pleased us better than driving the stake close alongside of the body, at an angle of 45°, and fastening them together by means of a straw band to prevent chafing. Never neglect to mulch the surface of the soil for a short distance from the trunk of the tree. Mice will occasionally find a harbor here and eat the bark; but if a little coal oil or some other offensive matter be rubbed on the bark, these enemies will be driven off. In conclusion, do not delay the planting operation too long, whether in autumn or spring, as early in the season will generally give a larger percentage of living plants.

Notes on Some of the New Conifers

In the Neighborhood of Boston.

BY PROF. C. S. SARGENT.

AS a supplement to Mr. Hoopes' article in the October number of THE HORTICULTURIST, in which he gives his experience with some of the newer Conifers, it may be interesting to note the condition in which we, in Eastern Massachusetts, find our coniferous plants after the three or four years of intense winter cold and summer drought through which we have passed. The similarity of the climate and flora of the eastern Asiatic and eastern North-American sea-boards leads us to hope that the Conifers of the north of China and Japan will succeed in the northern United States, and so far we have not hoped in vain. The following Japanese Pines seem able to resist all the attacks our climate can make on them: *Pinus densiflora*, *P. Massoniana*, *P. Koraiensis* and *P. parviflora*, while among the Spruces and Firs the following have proved perfectly hardy: *Abies polita*, *A. Alcocqueana*, *A. Veitchii*, *A. Isaga* and *A. firma*. The last unfortunately has a bad habit of losing its lower branches, which will detract from it as an ornamental tree. All the *Retinisporas*, with perhaps the exception of *R. ericoides*, have withstood the severest tests of climate perfectly uninjured. The most ornamental seem to be *R. obtusa aurea*, *R. pisifera aurea*, *R. filifera* and *R. obtusa*, in the order in which they are mentioned. None of the *Cryptomerias* land here, nor can *Thujopsis dolabrata* be considered hardy, although there are occasional specimens in favorable situations. This plant seems to require more shade than we usually give our young Conifers. Too much cannot be said in praise of the beautiful Umbrella Pine (*Sciadopytis*), which is not only perfectly hardy, but of such slow, compact growth, that it is well adapted for the garden proper or the smallest pleasure grounds. *Larix leptolepis* is another of the recent introductions from Japan, which is perfectly hardy here, and of such rapid growth and real beauty that it is deserving of more general cultivation. In speaking of Asiatic trees, I must not forget *Pinus Bengeava*, a native of the neighborhood of Pekin, which is perfectly hardy in all situations about Boston, as is *Juniperus Chinensis*, a tree which, when grown, is really ornamental.

So much for Asia.

I wish I could give as good a report of the introductions from our Pacific coast. Not a Conifer among all those growing west of the Rocky Mountains can be considered really hardy here, if we except *Pinus ponderosa* and the high mountain form of *Abies grandis*, which is *A. lasciocarpa*, or *Lowii* of English gardens, and *Parsonii* of American ones. This is perfectly hardy, and one of the best Conifers in cultivation. Of *Abies Pattoniana* and *A. Mertensiana* I still have hopes, though they must have a longer trial here before we can be quite sure of them. Even *Cupressus* —not *Kaensis*, which stands perfectly at Fishkill, N. Y.—we have had to give up, as well as *Cupressus Lawsoniana*, *Abies nobilis*, *Sequoia*, and all the fine Californian Pines, and hardest blow of all, the beautiful *Libocedrus*. On the other hand, the Colorado Conifers are

perfectly hardy, and we have from there *Abies Douglasii*, *A. Engelmanni*, *A. grandis*, *Pinus contesta*, *P. Belfouriana* and *Abies Menziesii*. There is a blue form of the latter, raised from seed collected by D. Parry in 1862, which is probably the most beautiful hardy Conifer in cultivation. And here note an interesting fact. Plants of *Abies Douglasii* and *A. Menziesii*, raised from seed collected in California or Oregon, or from trees in England, have in every case been killed by the cold of our winters, while plants of the same species, raised from seed collected at high elevations in Colorado, have, without exception, and in all situations, proved perfectly hardy. Nurserymen will do well to bear this in mind, and as next year will be the cone-bearing year in Colorado, to take steps to procure a good supply of coniferous seed from there, especially of *A. Douglasii*, the introduction of which into the Northern States will be of immense value. Among other Conifers, *Abies orientalis*, *A. Sibirica* (*P. pichta* of gardens), *A. Cephalonica*, *A. picturata* and *A. Nordmanniana* are all hardy. We can't hope for much from the Yews, with the exception of the Golden Yew, and even that suffered last winter; nor can many of the Junipers be relied on in this climate. There are, however, many fine forms of *Thuja* and *Biota* which are hardy, and promise to become beautiful additions to our pleasure grounds.

On the whole, the Massachusetts collections are richer than it was natural to expect after our severe winters; and their condition and extent offer considerable encouragement to lovers of coniferous plants in the United States.

Statistical Fallacies.

THE caudal paragraph in a late HORTICULTURIST, apparently climbing up behind for a surreptitious ride to fame, while no friendly or envious "cut behind" catches the attention of the watchful driver, is as follows:

"The orchards of the country are estimated to occupy 500,000 acres, and contain 20,000,000 trees in various stages of growth."

This is one of the bubbles floating in newspaperdom, which some one ought to puncture. I should like to take a hand in the work had I time. The absurdity of this estimate is easily demonstrated without a special census, though there is no record of the area in orchards in all the States. Ohio assessors annually make such returns, and those of 1873 aggregated 391,550 acres, notwithstanding the fact that central and western Ohio are very unreliable regions for orchard fruits. This is nearly three per cent. of the improved area of that State, and seventy-eight per cent. of the above estimate for the United States.

The record of apple trees alone, ten years ago, in Massachusetts, was 2,333,887. Allowing the trees to stand as closely as two rods apart, more than 58,000 acres would be required. Instead of three per cent., as in Ohio, it is quite certain that five per cent. for all orchard fruits in Massachusetts would not much exceed the fact. With 1,736,239 acres of improved land, this would be about 86,000 acres. Even four per cent. of the State returns of 1865, 1,937,378 acres, would make 77,000. At this rate Ohio, Massachusetts and diminutive Rhode Island, constituting together a fraction more than eight per cent. of the area of the "improved land in farms" of the United States, make up the 500,000 acres.

Then what shall be done with the orchards of California, with about four and a half millions of orchard fruit trees, and with the orchards of Michigan, Maryland and New Jersey, and thirty other States? I pause for a reply.

J. R. DODGE.

Washington, Sept. 22, 1875.

Lilies.—The Belladonna lily is recommended as a plant that makes a fine show in autumn. It is a native of the Cape of Good Hope. The flower scapes are generally about eighteen inches in height, and bear from eight to ten blossoms each, of a delicate white color, shaded with rose. It is just as beautiful for the house as it is for borders or beds. It is also a cheap bulb and hardy.

The Greenhouse.

Greenhouse for December.

IF there is any leisure at any time of the year, it should be found during this month, and advantage must be taken of any spare time to prepare stakes and labels in readiness for the busy season, which will soon be here. With the exception of large labels for outside plants, it does not pay to spend time making them by hand, for a year's supply for a small garden can be purchased for a trifle, and time can be better employed than by making small labels by hand; but a number may be painted in readiness for writing when required. A thick white lead paint is the best for the purpose; if written without paint, the name is soon obliterated. There have been several patent pencils invented for writing on wood without paint, but none we have seen have been of any use, and we have returned to the old black lead pencils. These are always to hand, for no gardener should be ever without a pencil and a good knife in his pocket. Any permanent plants requiring names should be attended to, for unless good wood is employed, the labels soon decay. It is best to obtain some cedar wood for the purpose of making those labels to be made by hand. The ordinary machine-made ones will last for all purposes, only requiring a single season's service. For large plants out of doors, a good cedar stick, smoothed and painted on the side for the name, is the cheapest label which can be obtained. If painted white, and the name painted on with a small brush and black paint, it will last for about three years. In England there are good cast-iron labels made for large plants, but we have not seen any in this country which we considered well adapted to the purpose. There are some suggestions about labels in the International Rules for Exhibitors; this may probably bring forward some good ideas on the subject. We require something cheap, neat and lasting, and, above all, not protected by patent rights.

Give all the plants a thorough look through to see there are no insects breeding established. If any insects are found, destroy them at once; it is less trouble to do so now than at any other season. It is well to give a slight fumigation with tobacco each week as a precaution; but plants in flower will generally suffer from smoke, and must be either removed or covered to prevent the smoke reaching the flowers.

Chrysanthemums will now be in full flower, and must be kept cool, or the flowers will not last long. A little frost will do these plants no injury, even when in full flower. The plants require a large quantity of water and free ventilation. If allowed to become very dry, and growing in a close, warm house, they become smothered with mildew. When the flowering season is past, the plants can be cut down and set out of the way to make a few cuttings. These can be generally taken off with roots and potted, when the old plants may be thrown away.

Primulas will now be flowering freely, and must be watered carefully and kept free from decayed leaves. The double varieties are the most useful, for the flowers last much longer than the single ones; but a few of a good strain of single varieties are very useful to make variety.

Cinerarias must be kept cool and moist, or insects will be troublesome. These plants will stand no frost; a very slight freeze will blacken the foliage, and when the buds are showing, the least frost will make the flowers blind. A little manure water will be useful when the buds are showing; if given earlier, it often induces too much foliage. The double-flowered varieties so far have not been at all satisfactory, but we do not see why they cannot be increased from cuttings after securing a few good varieties to start from. We used to propagate the single-named varieties from cuttings twenty years ago, but of late years seedlings have been grown. These are, of course, interesting, as we never know what variety we shall obtain until the plants flower; but it is rather disappointing to find, when the flowers open, that they are all one color, and very small, poor-shaped blooms. The seedsman

is usually blamed for this, but he probably never saw the flowers, and could only take the precaution of buying a strain of seed which was well recommended.

Calceolarias.—The same remarks apply to these plants. It is well to have the plants in flower as early in the season as possible, for these plants do not last long, and soon become deformed from insects in hot weather. A frequent gentle fumigation is a good preventive, but the foliage is easily injured by smoke.

Azaleas.—A few plants must be placed in heat for early blooming, if not already done. Select the forward plants and early varieties. We have plants of *Amœna* in flower in October, but these have been in a warm house all the season. The old *Indica alba* and *Narcissiflora* are good white varieties for very early blooming. It is a good time to give all the plants, including those for forcing, a good washing with the mixture before recommended. If the plants are clean, it will not injure them, and will act as a preventive; but in a mixed collection of plants, at the end of the season, there will be a few specks of red spider and thrip on some of the plants, which will soon increase and spread to other plants. The general stock of plants must be kept cool, and watered when necessary, giving a good soaking, and then leaving the plants to become tolerably dry before watering again.

Camellias will not require much attention this month where the plants are planted out. Pot plants will require careful watering, for if allowed to become dry at this season, the buds will fall off. If the foliage requires washing, it should be done before many of the buds are open.

Heaths will require care at this time, for it is often very cold at this season, which prevents much ventilation and necessitates a large amount of fire heat. Both of these causes are very unfavorable to the welfare of these plants, causing a weak growth out of season, and bringing mildew on the shoots. This must be prevented by dusting with flour of sulphur on the first appearance, or the plants are soon spoiled. Give a good soaking of water when required, but do not be continually sprinkling the surface of pots. The winter-blooming varieties will now be in full flower, and after all, these are the only valuable sorts for the general cultivator.

Deutzia gracilis and Astilbe japonica.—A few plants of these should be placed in heat for early blooming. They are both easily managed, and are very useful for cut flowers.

Tulips and Hyacinths.—A few of the early varieties must be placed in heat if the pots are well filled with roots. If not well rooted, the flowers will be poor, and of little service, so that it would be best to keep for forcing until later in the season. A few pots of Crocus and Snowdrops are also very pretty and useful for winter decoration, if the plants are not kept in heat too long.

Lily of the Valley can be forced in a rather dark and hot place. Some of the New York florists are very successful with this flower, and make considerable money by forcing it for the market. They usually plant it very thick on a hot-bed, employing only sand to grow it in; the main consideration is plenty of bottom heat and a rather dark place. Of course the roots are of no use after once blooming. Fresh flowering roots are imported each year from Germany and other parts of Europe. This appears to answer better than growing the roots in this country.

Roses will require a good, brisk heat, or the flowers will be small and few. A good light house is required for these plants at this season. If the plants are grown in pots, they will require careful watering, but it is best to have forcing Roses planted out; they are much less trouble, and give better results. If mildew is troublesome, give a good dusting with sulphur on the first appearance, for if the foliage is not good, flowers will be poor. A good dash with the syringe on all bright days will keep red spider in check, and a gentle fumigation with tobacco once a week will keep down green fly. Late pot Roses must be kept in a cool place, and rather dry.

Pelargoniums will be now growing freely, and should be shifted into the blooming pots. These plants are most useful when they

flower early; they last much longer, and the flowers are finer. Now is a good time for striking cuttings of these plants; they root freely, and will make nice plants by May to flower in five or six-inch pots. Look out for green fly on these plants, and kill it at once.

Winter-blooming Geraniums should now be in full beauty if grown in a house at from 50° to 60°. In a less heat than 50° they will not flower much. Bedding Geraniums must be kept rather dry, for these plants are best not growing much at this season. Any cuttings not yet potted must be attended to if there is room to pot them singly; if not, they will take no harm until later in the season.

Bedding Plants.—Examine the stock to see if there are any varieties not keeping well, or which, for any reason, the stock is short. Remove the plants into a more favorable position to obtain cuttings before the general stock requires propagating. The double blue Lobelia is one of the plants which does not keep very well; but if noticed in time, and a few cuttings put in at once, they will increase to any reasonable extent before planting time.

Tuberoses will require the same treatment advised for forcing Roses, except that it is necessary, if required in flower at this season, to give a bottom heat of from 80° to 85°. We have found it more satisfactory to lift flowering bulbs from the open ground for winter blooming, in preference to those kept dry from last year. It must be remembered, this bulb will continue growing all the year in the tropics, so that a season of rest is not necessary, although we are obliged to lift and dry them off, for the simple reasons that they are more easy of transportation when dry, and in this climate the frost would destroy the bulbs if left in the ground. Dry bulbs must be stored in a temperature of 60° in a dry place; if stored in a cool place, the heart of the bulb decays, and prevents the flowering.

Caladiums and Gloxinias at rest must be also placed in a warm position, moderately dry. These bulbs keep best in the soil in which they were grown. If allowed to become very dry through storing in a very parching place, the Gloxinias will shrivel up to a skin, and Caladiums will decay with dry rot, both of which must be avoided by occasional examination. The roots of *Alocasia Jenningsii*, being very small, require more moisture than Caladiums. The Evergreen Alocasias must be allowed to continue growing slowly; if the foliage is allowed to entirely decay, the plants frequently die. We have often received complaints on this subject from correspondents.

Marantas must be kept warm and tolerably moist, for most of the species are evergreen, so that the entire loss of the foliage checks the plants very much, independent of the loss of their beautiful colors during the dull season of the year.

Epiphyllums will now be in full beauty. These are very useful and beautiful plants, both for greenhouse and room decoration, the dry heat of rooms injuring these plants but little. By growing a number of varieties, they will be in flower from early in November until the end of February; and by growing some dwarf plants on their own roots, and grafting others at various heights, and also growing some in baskets, a great variety of form is given. There are also many more showy colors than there were in our early plant-growing days, when the varieties were limited to *Truncatum* and *Russellianum*, the former flowering in early winter, and the latter in the spring; but among the varieties raised from each, some flower earlier, and others at various times until spring, if grown in various temperatures.

Crassula lactea or perfoliata is a charming dwarf plant for winter blooming, and will now be in full flower. This is another capital plant for rooms, and the Echeverias of the *retusa* section makes a capital contrast in color for the same purpose. Since writing the notes on Epiphyllums, we notice these plants strongly recommended for room plants in the English *Gardener's Chronicle*. It is more essential to grow plants for that purpose in this country, which will stand the dry heat of rooms. We are obliged to keep more fire, and the climate is also much drier here than there.

Poinsettias will now be in full beauty,

and must not be kept too hot, or the beauty will soon be over, and they will not last long if placed in a very cool house.

Orchids.—Many of the winter bloomers will now be in full beauty, and make charming variety for decorating the greenhouse, and also for cut flowers. A few orchid flowers make at least fifty per cent. improvement in value and appearance to a stand of cut flowers. *Cypripedium insigne* will be in full flower. This plant, with care, will last in a favorable room three months in flower. Zygopetalums in variety will still be in flower; also late-blooming *Lælia autumnalis*, *L. acuminata*, and the charming *anceps* and *albida* will also be in full beauty. *Lycaste Skinneri* and *Maxillaria picta*—the latter a very free bloomer, and smelling like Hawthorn, *Lælia superiens*—will flower at the end of the month. The lovely *Dendrobium crassinode* will open early in the month. *Cattleya Warscewiczi* and *trianæa* in variety will also flower. The fine *Angræcum eburneum* and *bilobum*, with Calanthes in variety, including the splendid *Veitchii* and the magnificent *Phalænopsis Schilleriana* and *grandiflora*, will be in full beauty. We could mention a number of other fine orchids flowering at this season, but space is limited, and we will not give the printer too many long names at once, for fear of misspelling, or we might, on receipt of our number of THE HORTICULTURIST, be astonished at two or three mistakes in a single word—a fact which we noticed in a well known American nurseryman's catalogue in "Phalænopsis," with seventeen other mistakes on the same page. We only mention this to show critics they are open to criticism, for with every care, there is occasionally a mistake in printing names from a written copy; but in a catalogue there is no excuse, because every name is supposed to be corrected before the edition is printed.

A Few Greenhouse Plants.

Abutilon Boule de Neige.—This is the best variety of this useful family of plants in cultivation. It is of erect habit, having light green foliage, and pure white flowers, which are produced very freely—in fact, the plant is always in flower. It is very useful for cutting during the winter months, being the only really good white Abutilon we have; and like the others in its class, it is easily propagated from cuttings of the half-ripened wood, thriving well if potted in good loam and decayed manure.

A. vexillarium (*mesopotamicum*).—This one is of trailing habit, producing its numerous flowers singly from the axils of its lanceolate leaves. They have a red calyx, with yellow corolla. When trained on a rafter or trellis, the flowers are seen to more advantage than when allowed to ramble at will. There is a variegated variety of this, which is also very useful for either in-door or out-door decoration.

Acacia.—The species in this genus of plants are mostly natives of Australia. They are mostly of easy culture, and very attractive for decorating the greenhouse in winter and spring months, and very useful for cutting purposes. Pot in good loam and leaf mould; allow to stand out-doors during the summer months, giving plenty of water when necessary; encourage all the young growth possible, as it is on it the flowers are produced the following winter. Keep the plants from getting too large, by shortening the branches after they have done flowering, which will also help in producing more vigorous growth. There are many species in this genus. The following are the easiest grown and finest bloomers:

A. arnata—This species flowers when very small, producing its little golden balls of flowers solitary in the axils of the leaves.

A. Drummondii—One of the very prettiest in the class, having deep green pinnate leaves, with small cylindrical spikes of pale yellow flowers, produced abundantly. This forms a very compact, neat-looking plant, never growing to a large specimen.—*M. Milton, in Country Gentleman.*

VAN HULLE, of Ghent, Belgium, has received the buds of a water lily from Paraguay, that is said to excel the Victoria Regia in size and beauty.

Garden Gossip.

Suggestive Notes.

Table Decorations —An easily constructed, yet handsome ornament for the supper table, may be arranged as follows: In the center of the table, and if possible directly beneath the chandelier, place a well-shaped plant of graceful form, such as a Palm or Fern, concealing the pot with a wire frame closely woven, filling the space between with moss. Into this stick cut flowers with sprigs of small Maiden-hair Fern, arranged in an easy natural style, as any attempt at formality will destroy the effect. At the base, laying flat upon the table, place perfect Fern fronds of various kinds, which will impart the appearance of a rich green fringe.

Suspended from the chandelier, small wire baskets filled with flowers, ferns, and grasses, are very effective; whilst over the gas fixtures, may be twined delicate garlands of smilax, or fine-leaved Retinisporas. The outline of the wire frame should be bell-shaped, the larger diameter being at the base, and the smaller fitting neatly around the surface of the pot. Cover the latter with bright green moss, which may be studded with small flowers, or not, as taste directs.

Care of Plants.—There is an old saying, that plants are aware who love them, but it should have been, plants show by their appearance who love them. Many people fancy they are fond of flowers, and always have a few in their windows, but the fondness is too slight for the owners to give them needful attention. We have seen two windows side by side, the one filled with plants in the most luxuriant state of health and covered with bloom, whilst the other would embrace an array of pots filled with miserable half-starved sickly specimens, showing conclusively that something was radically wrong. And yet, were you to inquire of the respective owners, they would each say they were devoted to plants. The question resolves itself into this; any one who really loves plants sufficiently well to take care of them, and who feels an interest in the work, will always find out the method to keep them in a state of health. The necessary rules are few but imperative. Use only light fibrous loam, carefully avoiding garden soil; water when needed only, and then thoroughly; sponge off the dust as it accumulates on the foliage; give fresh air in mild sunshiny weather; fumigate with tobacco smoke when the green fly appears; and remove all dead leaves and sickly shoots.

A Valuable Native Tree.—The American *Agriculturist* accompanies a fine illustration, with a meritorious notice of the Yellow Wood, known to most as the *Virgilia lutea*, but to modern botanists, as the *Cladastris tinctoria*. It is found in rich soils in many sections of Kentucky and Tennessee. The tree never attains a large size, and is, therefore, valuable for the numerous small suburban places, where the larger trees are too frequently used, but always inappropriately.

When in bloom it is especially pretty, with its long drooping panicled racemes of large white flowers; and, to crown all, the tree is unexceptionably hardy, and grows thriftily under good cultivation. The *Agriculturist* remarks that it is one of our native trees that is too little known, and instances a nurseryman who was forced to destroy his trees, from lack of purchasers. We may say, more than one in the trade have found themselves placed in the same position, and we know of whole rows standing intact in a nursery, where each tree is a perfect specimen, and where they will stand in all probability, until the ground shall be needed for a better paying crop.

New Hardy Perennials.—The interesting Saxifrage family is represented by a very early blooming species called *Saxifraga Burseriana*, which promises to be valuable and distinct. The leaf-crowns are rigidly compact, of a pretty grayish-green tint. The flowers are borne on scarlet colored stalks, and are pure white, comparatively large, and open with the snow drop. It is exceedingly effective on rock work. Another stranger, *S. Notata*, is conspicuous for its remarkably

dense and cæspitose habit, the leaf-crowns appearing wedged together. It blooms much later than the above; flowers ivory-white in color. Like the preceding it will, doubtless, increase our list of handsome rock plants. Two new hybrids are also said to be very distinct and showy. One called *S. longifolia pulchella*, had quite narrow linear-lanceolate leaves; and the other *S. longifolia marginata* is distinguished for its very broad leaves, dotted or margined with white.

Sedum Novæ Species of Dr. Hooker, a beautiful new succulent, is noted for its very glaucescent or silvery-white leaf-tint. It is a very dwarf and compact grower, and described as being remarkably distinct. *S. Californicum* has just been introduced into English gardens, and has received a first-class certificate of merit by the Royal Botanic Society. From its dwarf compact habit, it may at first sight be taken for a House-leek. A pretty little rock cress, called *Arabis Japonica*, forms a compact cushion of rich green foliage: fine for the rockery.

A new *Armeria* is also spoken of as quite novel, being the first pure white flowered form yet grown. It has been named *A. cephalotus alba*. Like the others it is entirely hardy.

Epilobium obcordatum is described as one of the finest of the Willow-herb family. It is a rare Alpine species with rosy-crimson, salver-like blossoms, nearly one inch wide.

A new form of *Lavender*, with fragrant white flowers, and glaucous-white foliage, is likewise announced.

The Pampas Grass.—After testing a great variety of ornamental grasses, we are forced to admit there is nothing so far introduced that will supersede the *Gynerium argenteum*. There is a peculiar grace in the long slender drooping leaves of this superb plant that seems to be lacking in all the others; even the *Erianthus Ravennæ*, with its stately aspect, appears stiff in comparison. To see the Pampas Grass in perfection one should visit the California Gardens around San Francisco, and especially at Oakland, that city of rural homes, but even here at the North, it may be preserved in the open air during winter, by covering the roots with a thick coating of dry leaves and keeping off the rain by means of sloping boards.

It may also be taken up and removed to the cellar on the approach of frost, when it will remain uninjured by covering with soil, and occasionally administering a little water. Although introduced but a few years since, already our florists are multiplying the varieties at a wonderful rate. Some of these are quite distinct, whilst others are scarcely worthy of a distinctive name. Among the best might be mentioned *alba variegata*, and *aurea variegata*, the first with white stripes on the foliage, and the latter with golden yellow markings; *nana compactum* is a neat little compact growing dwarf form; *reflexum rubrum* is said to be a pretty variety with very distinct foliage and flowers; *floribunda* is remarkably floriferous; *giganteum* has a very large truss, and is enormously vigorous in growth; *roseum* is distinct and pretty with rose-purple colored flowers, and a form of this with dark reddish bloom, is called *purpurea;* whilst an entirely new variety, *carminarum*, is reported as having an elegant truss of bright red flowers.

New Greenhouse Plants.—Florists who deal in cut flowers will, doubtless, find the new evergreen stove shrub, *Tabernamontana camassa*, suited to their purpose. In growth it is dwarf and compact, with small, bright glossy-green leaves, reminding one of a Laurel, and terminal cymose-racemes of double white fragrant flowers, in the way of the Gardenia.

It is more easy to manage than the latter plant, and produces far more flowers, which remain a longer time on the plant. It also commences to bloom at a younger age, and the color is lighter.

A new climber, *Senecio macroglossus*, has neat ivy-like leaves, and golden-yellow flowers nearly two inches in width; succeeding admirably as a decorative plant for rooms.

Cantua corymbiflora, is the name of a new and distinct plant introduced by Mr. Roezl. The trumpet-shaped pure white flowers are borne in terminal trusses.

Gardening.

Winter Protection of Plants.

BY A. S. FULLER.

PROTECTING plants in winter is an operation which admits of an endless number of variations. Generally, the object of protection is to guard against injury from a low temperature, still this is far from being the principal source of loss either with tender or half hardy plants. Sun, wind and drouth in winter cause a far greater destruction of plants than the mere temperature of the atmosphere. If a man should set up a board on the south side of a tender rose or raspberry plant, thereby shielding it entirely from the warm rays of the sun in winter, many persons would think it a singular method of affording protection; but in ninety-nine instances out of every hundred it would be far better than placing the board on the north side.

I have known many of our tender raspberries to withstand twenty degrees below zero without injury, when grown in a shady place, while other plants of the same sort were killed to the ground in exposed positions, only a few feet distant; consequently we cannot attribute the difference to temperature alone. Sudden changes of temperature in winter, to which all plants are subjected when exposed to the sun in our climate, is very fatal to the half hardy kinds, but even this is not so injurious as the dryness of the atmosphere, which appears to hasten the evaporation of all the natural juices of the plants, leaving the stems and branches as dry as though baked in an oven.

It is now well known that evaporation of the natural juices from the young twigs of trees continues even during the winter months, proceeding more rapidly during the prevalence of dry winds than when the air is still, and well charged with moisture.

It is owing to this evaporation that so many kinds of trees fail upon the Western plains, and especially evergreens, through the leaves of which moisture is constantly passing off during the cold dry weather in winter. At Greeley, Denver, and Colorado Springs, and other settlements in Colorado, evergreens have been planted over and over again without success, while right in sight upon the mountains, various species grow luxuriantly, although subjected to many degrees lower temperature. But the roots of these trees, growing at elevations of five to ten thousand feet above the sea level, are imbedded in loose, moist soil, or reaching far away in the crevices of rocks, while the melting snows and rising mists from the waterfalls of the deep canyons keep the surrounding atmosphere constantly charged with moisture. On the plains below, the earth contains very little water when it freezes up in the fall, little or no rain or snow falls during the winter, while drying winds prevail almost unceasingly; consequently, evergreens and many other trees are actually dried to death, and not killed by cold.

It is for the want of making hygrometrical as well as thermometrical observations in regard to a region of country, or even of circumscribed localities, that so many persons make such lamentable failures in attempting the cultivation of certain trees or other plants on an extended scale. The climate of a locality may be warm enough to insure the success of a certain class of plants, but at the same time be too wet, or too dry. Now, the same principles which we see demonstrated to such extremes in Colorado, are not wholly inoperative with us down here on the seacoast. By throwing our grape vines down upon the ground in the fall we protect them somewhat from cold, but the principal benefit is in securing a moist and unchangeable atmosphere.

The benefits, therefore, to be sought through protection of half hardy plants in winter are not in consequence of employing means for keeping out the cold, but by preventing evaporation and injury from sudden changes of temperature.

In all localities where snow falls to a considerable depth in winter, and remains on the ground, all low growing plants receive a sufficient protection, but in the intermediate regions, between the North and South, or upon the Western plains, some kind of an arti-

ficial covering is required even for what is usually considered hardy plants, for instance, the common varieties of the strawberry. Only a slight covering is required, but that little will usually produce very marked beneficial results.

But in giving protection to half hardy plants, such as roses, evergreens, and climbers of various kinds, it is well to remember that it is not best to entirely shut out the water which may fall in the form of rain or snow, for as I have endeavored to show that moisture is a very essential element in preserving the life of plants even in winter, I have often seen plants done up so tightly in straw, that they came out in spring as dry as a clay pipe-stem, and the gardener, who made this shroud, wondered why they winter-killed when "done up so nicely."

With all half hardy vines, such as clematis, honeysuckles and roses, I merely lay them down upon the ground at full length, or coil about the stakes near the base, then throw a little loose soil over them or a forkful of coarse manure. Shrubs, such as evergreens, requiring protection, are given it by merely driving a few stakes around them, and the space between filled in with coarse hay, a small quantity placed over and among the branches.

Tea, Bourbon, Noisette, and other tender roses, may either be dug up in the fall and heeled-in, or bent down and covered with coarse manure or earth at the approach of cold weather.

As I protect my little ornamental plants from changes of temperature and drying winds in winter, so would I protect the orchard by surrounding it with a belt of evergreens, if located in a dry climate, like that of a greater part of our Northern States.

Interesting and Ornamental Grasses.

BY A. VEITCH.

ALTHOUGH grasses constitute a large percentage of the vegetation of the globe, but few of them, comparatively, have been taken hold of by the horticulturist, and employed by him for purposes of garden decoration. Their place in the economy of life seems to be other than that, and the benefits they confer of a more substantial and utilitarian character. Hence, it is, they are regarded chiefly as furnishing the principal element of support, not only to man in his pride of place, but to all beasts wild and tame.

But, notwithstanding this, there are individuals in the family which challenge attention, if not for the beauty of their colors, at least for the gracefulness of their forms. This is best known to those who have so far yielded to their allurements as to seek after them in their natural habitats; whether that be in the glades of the woods, or on treeless uplands; in dark meadows, or by the sides of lakes and streams. Go where one may, fresh forms meet the eye as interesting as they are numerous. There is the light and airy Agrostis aspera, and Panicum capillare, swaying loosely in the wind. The more stately Sorghum nutans with panicles somewhat contracted, russet-brown, and polished so as to shine on all important occasions. And the clandestine Vilfa, whose flowers seldom get outside their sheaths, yet fail not to perfect seed as readily as if basking free in the sunshine.

In observing this trait in the Vilfa for the first time, one is inclined to ask, What burrowing insect has been at work here conveying the fertilizing meal to where it can do the most good? Or what other natural provision is there, making the accomplishment of this work possible under so great seeming disadvantages? Or what the constitutional peculiarity which requires concealment to perform that which in the most of cases can only be done in freedom and light? In this case, however trivial it may seem, there is a most interesting adaptation of means to ends. The filaments, three in number, which spring from the base of the ovary (*hypogynous*), are exceedingly delicate, not being required for support, but simply as channels through which the anthers receive their nourishment; and are equal in length to the ovary, which is crowned with two styles; around this bifurcate summit the anthers are arranged to look very much like the cup-like hoods which surmount the spore cases of many kinds of moss. So we see in this adjustment of parts how the work

of fertilization can be accomplished even though every part of each individual flower is closely wrapped up in its own subtending glumes, and all in a sheath as close fitting as the cerements which enfold an Egyptian mummy.

But this aside: the species we have named, and many more to be met with in every rural walk, are deserving of as much attention as some which the cultivator regards with favor and nurses with care. It is true, they need not be ranked with cultivated plants, nor occupy space in the garden; but they may at least be planted in appropriate places about the rural homes of those whose tastes lead them to study the characters, or admire the beauties of this class of plants. In this way home-walks might be made much more attractive than they often are, and present a greater number of individual objects for study and comparison than is generally to be met with in such narrow bounds. More especially is this the case where water mingles with the scene, either in large or small bodies; for many of the most stately and showy species flourish best where that element abounds. And these, when properly disposed of, either by the margins of such bodies, or on islets, seem more in harmony with nature, and lend a better grace to all true adornments, than any number of "animals fantastical."

But in these days when grouping plants with a view to produce pleasing or striking effects is so generally practiced, we are confined to a few varieties known only in gardens, and foreigners at that, but withal possessed of excellent qualities for this kind of work.

And perhaps it is not slighting any one in the group to place in the front ranks Arundo Donax versicolor—a plant which has been cultivated more or less from time immemorial, but never yet to the extent it deserves. Its broad ribbon-like leaves set off with fine effect the variable breadths of yellowish-white and green stripes which run the whole length of the blades, and down the sheaths which clasp the stem to the second joint below; thus giving an example of a plant not only with variegated leaves, but stems as well. Its lively and striking appearance render it suitable to plant where the aim is to relieve a dull aspect, or throw an air of cheerfulness over objects which may be deemed oppressively sober. In mixed beds it is perfectly at home, and contrasts well with almost any other plants with which it may be associated; with Dracænas, Coleus, Cannas, and the like; either in distinct lines, or when no other order of arrangement is observed than what has exclusive reference to height and color.

It can be propagated, though sparingly, by dividing the old roots; or as Dracænas are by laying well ripened cones in sand in the propagating house; or the plants may be either potted or placed in tubs of water with a little earth added and placed in a temperate house, where they will continue to give a fair supply of cuttings all the winter through.

A suitable companion for this old favorite is now to be had in Eulalia Japonica variegata; a recent introduction from Japan, as the name imports, and one which is destined to take a leading place in all collections where grasses are admissible. It is said to be perfectly hardy—an advantage it has over the Arundo—and from the way in which it has acted the present season, we judge it can also be increased much more readily. The leaves are long and recurved; about three-quarters of an inch in breadth; rough on the edges; strongly keeled, and distinctly striped with clear white and green. The entire plant resembles very much Pandanus Javanica variegata, only the leaves are two-ranked, instead of being in threes as in the Pandanus.

In addition to its being valuable as a bedding plant, the flowers also are attractive, whether on the plant, or when gathered and assorted with others as household ornaments. They are not, however, superior in this respect to those of another also of recent introduction—Arundo conspicua—and for stateliness and show in the garden greatly superior. This new arrival we regard as more valuable than even the Pampas Grass, which, in general appearance, it very much resembles; as it flowers with greater freedom and may also prove more hardy.

New Haven, Conn.

Noxious Insects.

THE *Practical Farmer* gives the following brief directions concerning a number of insect pests of the garden, which are so clear that they will aid any farmer or tree grower to do much towards protecting his products from some of their worst enemies:

Cabbage Flea.—A small, black, nimble, jumping insect; eats the leaves of young cabbage plants, just germinated from seed, and also of early cabbage when transplanted from hot beds. A dusting of fresh air-slacked lime lightly upon the leaves when wet with dew in the morning will kill or drive them off. If three applications are needed, let forty-eight hours intervene between the applications. We have never used anything so effective as this.

Cabbage Louse.—A fat, greenish, mealy insect; multiplies rapidly; eats the leaves of large cabbage. Dusting of air-slacked lime kills them.

Cabbage Grub.—A black, ugly grub; lives in the ground, and eats through the stems of young cabbage plants of all varieties so that the heads fall off. Scratch lightly around the plants and those near them. When bugs turn up kill them; where one is found another is not far off, as they are always in pairs, and but little distance from each other.

Wire Worm is more destructive to seeds, as corn and lima beans. Examine for the worms and kill them.

Celery Grub grows two inchs long and thick; striped green and black; pushes out a horn when touched, eats the leaves of celery, carrot, parsnip and parsley. Catch with the hand and kill it.

Mignonette Grub.—Pale green, small at first but grows rapidly, eats the leaves of Mignonette, Sweet Alyssum, etc. Catch and kill it.

Black, Hairy Worm.—Kill whenever found; it is very destructive.

Yellow, Hairy Tree Caterpillar.—Kill wherever found; it is always in singles, upon trees, bushes, fences and almost everywhere in its season.

Black Chick devours rapidly the leaves of Sweet Clematis, egg-plants, peppers, etc. One syringing with carbolic acid soap and water with flowers of sulphur will kill it. It is very nimble.

Common Tree Caterpillar.—Kill with syringing carbolic soap solution upon small trees, first catching all that can be caught; upon half grown trees, dust the leaves thick with slacked lime early in May to keep them off, but if fairly on hand reach up a round hair brush on a long pole, turn it round in their nest and pull them down and kill; after that spread lime over the trees or syringe them with strong solution of carbolic soap.

Plum Curculio.—Dust with slacked lime, and syringe with strong solution of carbolic soap and sulphur in early spring. This will tend to keep it off, at least for a while, and then repeat the dose.

Rose Bug is very numerous; syringing with strong solution will drive them off, but they afterward attack fruit trees—especially plum; better take a pail half full of boiling water, and in the morning take hold of a rose shoot and shake or strip the bug in a pail, this kills them, and is very easy and quickly done.

Dusty Louse.—Attacks the monthly honeysuckle and found at the roots of German Asters in hot, dry weather. Syringing the honeysuckle with strong carbolic solution will kill it; also watering the asters heavily.

Shoot Grub.—A fly; deposits its eggs in the young shoots of roses and old shoots of currant bushes. Grubs are hatched and eat into the hearts of the shoots and live upon the centre and kills them; when shoots droop cut them off and split them open and there is the grub, which should be destroyed.

Evergreen Tree Grub.—A fly; deposits its eggs in the main leader of the evergreen trees; grubs are hatched and eat into the heart and live upon the pith—eating upwards. When the leaders wither or look sickly, cut them off and split them up and kill Mr. Grub; it can be seen when such grubs are in the shoots as there are holes with cut wood—like sawdust—around them and upon the shoots a distance off.

Fruit Culture.

Twig-blight in the Apple and Quince.

BY R. J. BLACK.

DR. PARKER'S article in the October HORTICULTURIST, on "The New Apple Tree Disease," seems to describe Twig-blight, as it is called in several parts of the country.

The disease, or whatever it is, is peculiar, being worse some years than others; and attacking some varieties and passing by others. The Fall Pippin especially, had become so much affected, year after year, that the variety had become worthless, and was thrown out here; but this year (a very wet one until after harvest), there is no blight; and Fall Pippin and other affected sorts are once more beautiful in their green luxuriance; except that the bare dead shoots in various parts of the trees, tell of the past trouble: *May it be past forever.*

It has been noticed that certain sorts top-grafted on a sort not subject to the blight themselves, blighted badly, without affecting the stock. Fearing the loss of the varieties, as they were rare, cions were taken from them and grafted on two other trees, different kinds, at some distance and in different exposure; and the hope that the experiment might be successful has been verified thus far, as in three years they have not blighted. Whether this immunity is the result of change in locality, or of a power of resistance in the latter stocks, which the first one possessed but partially, is only matter of conjecture.

Fairfield Co., Ohio.

Huckleberries.

BY C. W. I.

EDITOR HORTICULTURIST: In looking over the August number of your very interesting journal, I met with P. D. Hammond's article on the Huckleberry.

He undertakes to say that this berry can be cultivated, I suppose he means at a profit. He also quotes Fuller on the same point, but I would like to know why these experienced fruit growers don't go to work and try this experiment themselves, and reap the profit that can be made by so doing? I have no doubt it can be civilized, but the cultivated fruit cannot be made to pay when it can be obtained in quantities for the picking. There is another point that I wish to call attention to, and that is, the different varieties. Why has no one ever considered this subject enough to classify and name them? The fruit is a good one, very saleable in New York markets, and when scarce sell from $4 to $6 per bushel. Yet the varieties come and go without even a name. If they are large and fine they sell readily to consumers, if small and hard they are shipped off to a more distant market.

Mr. H. refers to a forty acre field. Why, in New Jersey there are thousands of acres containing this fruit, and it is not unusual for us to have a thousand bushels daily during the height of the crop.

New Grapes at the Ohio Fair.

MR. M. B. BATEMAN, writing of the new grapes shown at the Ohio State fair at Columbus, to the Ohio *Farmer*, says: "Mr. G. W. Campbell, who was absent at Chicago, sent in a box of new grapes, consisting of Eva, Lady and Martha. His letter accompanying them stated that the bunches of Eva were the first product of a graft set last year from Gen. Brinkerhoff's vine at Mansfield. The bunch and berries are smaller than those of the Lady and the time of ripening later, but there may be improvement in all these respects as the vine grows older. The quality as shown at Mansfield, when ripe, was considered finer than Martha and Lady. The specimens of Lady at this meeting were well ripened, showing its earliness, and Mr. Campbell stated that all varieties with him were ten days later than usual this season. The quality was pronounced very good—much better than Martha, and the bunches of neater shape. A new wine grape, not yet named, was presented by G. M. High, who stated that it was a seedling produced at Put-in Bay by a German named Schriedt, who claimed

that it was from seed of the Delaware; but its appearance and flavor show more relationship to the Clinton. It has fruited for five or six years, and the vine is found to be very healthy and productive—more so than any others in poor seasons—and the fruit ripens early and makes excellent wine. It was awarded the premium for the best new seedling at the fair.

Mr. G. F. Newton, of Millersburgh, presented a new grape, a seedling of Isabella, and ripening about a month earlier than that variety—the fruit at this time being riper than any samples of Hartford or Ives. The color is black, like Hartford, a trifle smaller than that variety, and having the same habit of dropping from the stem when handled. The quality was thought to be not quite as good as the Hartford, but its earliness may give it value, notwithstanding its faults.

Another seedling grape was presented by Mr. Todd, who stated that it came from Berlin, Erie county. It was of reddish color and fair appearance, but too foxy to merit commendation.

A number of seedling apples were presented as usual at the fair, some of them of good appearance and quality but none seeming to merit special commendation or the premium offered."

A Governor's Vineyard.

THE Richland (Pulaski county, Mo.) *Sentinel* has the following statement concerning ex-Gov. Brown's vineyards: "About three miles from Iron Mountain we came to the farm and residence of ex-Gov. B. Gratz Brown and his brother, Knox Brown. We had learned that they had quite an extensive vineyard and orchard, and having a curiosity to gratify in the fruit department, we resolved to call and see what we could learn. We found a very intelligent colored woman at the door, and inquired if Mr. B. was at home. The governor was away, but presently Mr. Knox Brown made his appearance and very kindly showed us through his vineyard.

They have about 15,000 vines, all trained to stakes, and small stakes at that. They consider stakes the best for economy in cost, cultivation and air influence. The vines are in rows about seven feet each way, which they think too close. They favor eight by ten feet. The vines are grown to two arms some three or four feet long, then bowed over and twined together, so that they are not over two and a half feet high. The new wood is allowed to make its full growth. Towards spring, the new wood is cut back two or three joints or eyes, for fruit, and the new growth again allowed to spread itself for the next year's clipping back. They are full in the faith that grapes will pay better than anything else in the business.

I was particularly struck with their peach orchard, the trees all branching out regularly from sixteen to eighteen inches from the ground. In setting the trees, they cut them down sixteen inches and trimmed off all the side branches, leaving a little bare naked stub. Nature soon forces out some new shoots, which can be very easily trained in any desired shape. They then only prune back the ends of the longest branches, and keep the tree top open. Their apple trees are treated very similarly, though allowed to branch out a little higher from the ground. Growing them in this manner keeps them stocky, out of the way of high winds, and not the least merit is, that nearly all the fruit can be hand-picked by persons standing on the ground, thus preventing the fruit from being bruised as in the ordinary way.

Another marked feature in their farming is, several hundred acres of timothy meadow in connection with a flock of sheep and a herd of cattle. They find hay far better for stock than corn—cheaper to raise and more economical in feeding out; and stock look better, sell better and are better. When will our farmers turn three-fourths of their corn fields into timothy meadows? Until then, they must expect an up-hill road to travel.

New Grapes.

THE *Prairie Farmer*, acknowledging receipt of a new grape, the Elvira, a new and promising wine grape, raised by Bush, Son & Meissner of Bushberg, Mo., says:

"It is a seedling of Taylor, grown by Jacob Rimmel, of Missouri, and has all, or nearly all the good qualities of its parent, with the advantage of being a more productive variety. Its leaf is said to show traces of a Labrusca cross, and we fancy we detect a slight trace of foxiness in the taste. The berries are considerably larger than those of the Taylor, and the bunches exceedingly compact, unlike that variety, which fertilizes badly. It is too small and too light colored for a market grape, but should make an excellent wine. It propagates readily from cuttings, like its parent, and can soon be grown in great quantity.

Mr. Bush says: "Its great productiveness, hardiness, vigor of growth and foliage, comparative exemption from rot and mildew, (standing the severe test of this season, even), the purity of its taste—free from foxiness or other unpleasant taste—its richness in saccharine, induce us to look upon this grape as the first new seedling that may replace the Catawba—which most of us had to discard, though very reluctantly."

Wine Culture in Italy.

THE growth of the vinicultural interest in Italy during the last few years has lately manifested itself by remarkable results. At the London Exposition in 1862, of 130 kinds of Italian wine exhibited, 45 received premiums. At the Vienna Exposition of 1873, of 230 Italian wines exhibited, 101 either received a premium or an honorable mention. Italy devotes over 6,000,000 acres to vine culture, producing in 1873 over 870,000,000 gallons of wine. Of this amount about 250,000,000 gallons are credited to Naples and Sicily; 200,000,000 gallons to Emilia, Umbria, and the Roman marshes; 200,000,000 to the older provinces. The average price, as officially estimated by the Italian statistical authorities, was about nineteen cents per gallon, making the total value of the wine crop product $165,000,000. The value of exports of Italian wine rose from $2,799,696 in 1871 to $4,695,672. France takes the largest proportion of this export; next in order England, Switzerland, Austria, and the United States. Egypt takes a large quantity of bottles, while considerable quantities of bottled wine are shipped to Tunis, Tripoli, Brazil, and Holland.—*Ag. Depart. Report.*

The Black Slug.

WE perceive that the black slug has been at work on the plum and cherry trees, destroying the vitality of the foliage. They devour the pulpy portion of the leaves, leaving the fibrous skeleton. The leaves do not have the blackened appearance of those trees affected with blight, but are of a brown color.

This is not a formidable pest, except when neglected. If allowed to defoliate the trees for a few successive years it will destroy them. Almost any kind of dust, scattered over the leaves, will kill them. They are covered with a slime to which dust will adhere, stopping up the pores and suffocating them. Fine road dust, coal ashes, air-slacked lime, or any other dust that will fly freely, will banish them.

It is folly to allow an enemy, so easily vanquished as is the black slug, to inflict so much injury upon trees, bringing the sere and yellow of autumn in midsummer.

Strawberry Mulch.

LAST spring we put out plenty of oat straw between our rows of strawberries, which makes a very clean, rich mulch for the vines, keeping the berries delightfully neat. After harvesting the fruit the mulch was removed, and since then we have been diligently at work eradicating the oats that have sprung up where the straw lay. But in the last number of Purdy's *Fruit Recorder* there is a short item giving us a hint worth preserving. It is recommended that oats and buckwheat be sown between the rows and allowed to grow for the purpose of a mulch. If we had only known that we were right in the fashion and allowed our oats to grow, what an amount of labor we might have saved.—*Detroit Free Press.*

Quince Culture.

A correspondent of New York Sun, writing on quinces, says that the apple or orange quince is generally most salable, and is most grown. It is larger than the pear quince, and the fruit more tender. Rea's Mammoth, a sub-variety of the orange quince, is highly commended as being much larger than the common variety, and more productive. The fruit is also tender throughout, like an apple, and free from the hardness and harshness of the pear quince, found sometimes in the orange. There are some seasons when the pear quince, ripening and keeping later, has a decided advantage over the earlier variety, as, for example, when there is a glut of fruits early in the season, depressing prices of all kinds. In such years I have known pear quinces to sell at high prices after all the orange quinces had rotted. Generally, however, the market for quinces is for canning, and to a great extent independent of the abundance or scarcity of other fruits. There is no better canned fruit than quinces, and none other will quite take its place. As the orange quince will probably always be most grown, the buyers will generally be in market chiefly when it is at its prime. Those who have grown Rea's Mammoth for two or three years say it is so much larger and more productive than other varieties that it is destined to displace all. My own trees of Rea's Mammoth are not yet in bearing. All varieties of quinces are hardy during the severest western New York winters. As the blossoms do not appear till June, there is never any danger of injury from late spring frosts.

Quince trees may be transplanted at one, two, three, five, or even more years old, of course taking care to injure the roots as little as possible. An old tree may thus be transplanted, but the fruit should be picked off the first year and a full crop can be had the next. But young trees are so much cheaper, and come into bearing so soon, that for a large plantation they are preferable. My way has been to buy very few quince trees, except to get a new variety—as Rea's Mammoth. They are propagated very readily from layers, and especially by a method described in Thomas's American Fruit Culturist, page 299—by cutting off the younger shoot, leaving ten or more buds at the base, and earthing around these. At the end of the year these buds will be vigorous shoots, well rooted, and ready to plant in the orchard. This is cheaper than buying, as young quince trees are now quite high, and especially the Rea's Mammoth. By purchasing half a dozen or dozen plants, and layering them, N. H. can soon supply himself and have quince trees for sale. He will also find an advantage in growing roots or other hoed crops between the rows of his young quince trees, thus insuring their better care and making something from the land for the two or three years before his quince orchard will begin to bear.

Camphor in Formosa.—As the gigantic laurels from which the camphor is obtained are found only in the mountains in the possession of the arborigines, the acquisition of a constant supply is somewhat difficult. Only from those tribes which are on friendly terms with the Chinese can leave be obtained to cut down the trees. With such, a present given to the chief, gains, as a rule, the required permission. The Chinese woodman then makes a choice of the trees which appear to be well supplied with sap, and, having felled them, he keeps the best parts for timber, and reserves the remainder for the iron boiling pots, by means of which is evolved the sublimated vapor which yields the camphor. In the neighborhood of Tamsuy alone, 800,000 pounds of this valuable commodity are produced annually. Petroleum also adds to the riches of the island, which, both from its natural and artificial products, is well worth a struggle on the part of the Japanese to obtain, and on the part of China to defend.—*Cornhill Magazine.*

Mr. Vick says in his "Floral Guide" that ten drops of carbolic acid, to be obtained from any of our druggists, put in a pint of water and poured on the earth in flower pots, will destroy all earth-worms, which do so much damage to the plants.

Editor's Portfolio.

FAREWELL WORDS.

Sadly do we write these unwelcome words —*Farewell, Farewell!*

To the good old friends who through long and unchanging years of prosperity or vicissitude, THE HORTICULTURIST has made many a glad visit, and brightened many a face, home, or rural retreat, with its pleasant ways, and helped with many a useful suggestion, the tidings that *this is its last number*, will come with astonishment and perhaps pain. Long has been its life of honor, and to a greater extent than any similar journal has it constantly borne with it the current of popular appreciation and well-deserved fame. *Thirty* years of noble life brings it to full manhood; and yet, as it lays down its life, and we feel no more it is to give a pleasant greeting to us, no more it hath sweet converse with friends social and sincere, it seems like the breaking up of family ties, the sundering of a link in the great chain which binds our tastes together, and the burial of one very near and dear to us. But time hath wrought other changes too. Many of our old friends have left it for newer and more popular aspirants for public favor; others have gone the long silent way beyond this life, and have left none to take their place. One by one the old-time ranks have broken; and among the veterans of by-gone years who have maintained steadfast friendship to the *good old Horticulturist* we find but very few who still remain true.

Newer and cheaper journals have enticed away its lovers, though enough have still remained and kept its vigor firmly maintained; yet it was impossible to gain new glory or reach to wider success.

Treasuring pleasant memories of the past; looking lovingly upon all the good it hath done, and trusting that in its new field of usefulness, where, with added influence and more permanent success, its name will be preserved with added grace down the distant years, we sadly lay down the pen we have so long and gladly devoted to its service, and bid it a long, long FAREWELL—FAREWELL.

THE EDITOR.

Publisher's Notice.

This day I have disposed of the subscription list, good will, name and other business of THE HORTICULTURIST, for purposes of consolidation with the GARDENER'S MONTHLY of Philadelphia, Pa., published by Chas. H. Marot. The reasons which have compelled me to this course have resulted mainly from press of other business occupations, successes and engagements which require all my time and leave me none to give adequate care and attention to the interests of the THE HORTICULTURIST. The six years of my connection with it have been of loving service. I took it with fond affection for its name and fame, and to the best of my ability, taste and judgment have endeavored to keep up a lively interest in its welfare, and make it grow in popularity and good repute. I am pleased to say that my efforts have been successful. Every year it has been financially a success, and even now it possesses the necessary business to guarantee its life for many years to come. But the new children, and literary interests which also under my care have grown up around the old friend, have outstripped it, and my time is needed for them.

Believing that THE HORTICULTURIST could not serve its purposes or history any better, or more nobly, I have given it to the care of Mr. Meehan, who for so many years in its early history was its principal writer and assistant editor. United with the GARDENER'S MONTHLY, it will have new strength; its name will be maintained; new vigor and life and popularity will accrue, and the entire

family of its friends will be abundantly satisfied, and feel that it is no longer *lost to them*, but has been mated to its worthy partner, and, together, they will nobly bear a more beautiful, united, happy, peaceful life for many years to come.

The subscription list of THE HORTICULTURIST, also the advertising pages, will be added to the GARDENER'S MONTHLY; and as I will retain a pecuniary interest in the journals for some time to come, subscriptions and correspondence relating to THE HORTICULTURIST may still be directed to me, or the Philadelphia office.

I bespeak for the new management the confidence of the public and the continuance of the patronage of all the old friends of THE HORTICULTURIST.

HENRY T. WILLIAMS,
December 15, 1875. *Publisher.*

A Garden Farm.

Horatio Crain, of Detroit, writes to the *Michigan Farmer* an interesting account of the garden farm of Mr. B. Borton, who resides just beyond North Toledo, on the lake shore. We make the following extracts, as showing what may be done by judicious cultivation:

The city of Toledo is situated about five miles from where the Maumee river discharges into Lake Erie. The Ottawa river, or Ten Mile Creek, has its source north of Toledo, and flowing nearly parallel to a portion of the Maumee, empties into that river at its mouth. Thus is formed a gradually tapering strip of land lying between the two streams, with Lake Erie on the east. This little territory, so favorably located for fruit and vegetable growing, was long occupied by the old French settlers and their descendants, and their improvements were of the ancient order, the fishery and the hunt possessing for them attractions superior to agriculture. To this locality nine years ago there came from southern Ohio a Jerseyman, named Borton, who, being versed in all the mysteries of market gardening, bought 51 acres of wild land for $800, and with his father and sons has carried on a farm for profit. Known far and wide as the Jersey farmer, because of his system of culture, the designation is not inapt, since, with his house in Ohio and his barn in Michigan, his citizenship is not so well defined after all.

Perhaps a few notes of his progress may be of interest. The yield of a single acre in 1873–4 amounted to the original cost of the farm. This acre, in Mammoth Cluster raspberries, three years old, yielded last year 73 bushels, realizing $300. From the same acre 9,000 plants were sold for $90, and as many more were obtained and set out on the farm. By cultivating vegetables between the rows of raspberries, the yield of this acre was increased to $660 that year. Four years ago this acre was in strawberries and yielded handsomely. This year the acre was given over to raspberries, and on the 12th and 13th of July nearly 44 bushels were picked, and then the acre of berries looked as if it had not been touched. A fair estimate of the yield of that acre was over 150 bushels, and the price then obtained was five dollars per bushel, which would indicate a gross income of $750 this year from this same acre. Mr. Borton is convenient to market, sells through one agent year after year, and by watching the market closely realizes generally the top price for his produce. He has a half-acre, which for five years has been in onions, yielding annually 200 bushels, selling at $1.25 per bushel. Thus the half-acre annually returns $250, and for five years has yielded say $1,250.

Mr. Borton's sweet potatoes compared favorably with those grown in the choicest parts of New Jersey. A three-quarter-acre patch yielded last year 100 bushels of marketable potatoes, which brought two dollars per bushel, or $200 for the three-quarter acre. For five years past he has obtained this price for his sweet potatoes. There were six acres in Early Rose and Neshannocks, cultivated with double-shoveled plow and yielding about 300 bushels per acre. There was a large

patch of peas, the seed of which was bought for Daniel O'Rourkes, yielding about 60 bushels, but which were not true to name, proving to be a late pea, hence, instead of selling for from $1.50 to $1 per bushel, the price realized would be from 75 cents down to nothing. This was a loss inflicted by an ignorant or dishonest seedsman. Early sweet corn nets Mr. Borton about $100 per acre, besides the fodder. While in Burlington County, N. J., he secured an ear or two of small but very early corn. Planting this with a larger variety, in a couple of seasons a hybrid combining sweetness, size and earliness, which has proved a very profitable variety.

All Mr. Borton's acres under cultivation are treated like a garden with thorough culture. The soil is sandy loam, mixed with fine shells and lime, with clay subsoil. But little manuring is found necessary, for Mr. Borton keeps no stock but for work and a milch cow or two. However, what fine manure he may care to use he readily obtains at Toledo.

Hale's Early Peaches.

Chas. Brown, of Dover, Del., writing in a local paper, respecting the Hale Early Peach, a cultivator on the Delaware Peninsula says:

The oldest Hale's early trees on this Peninsula are now ten years old—mine are nine. They have nearly all been profitless before 1874, from the premature rotting of the fruit. My oldest trees, 450 in number, the past year, bore full crops, without any rotting. I marked 1407 baskets from them, besides about 100 that softened *without rotting*, after the last picking—934 baskets were sold in New York, averaging 91 cents per basket, clear of freight, commissions, etc., clearing $849.94—and 473 baskets sold in Philadelphia, averaging 76 cents, $359.98—whole crop, $1,200.42. A single car load, sold in New York, August the 6th, for $878.75, less freight and commission, $664.71.

I think the *age* of the trees, more than Mr. Lemosy's plan of allowing the grass and weeds to overrun his orchard, was the cause of his success. I tried this with mine, but it failed to do any good. In the spring of 1871 I cut the head, or centre stem or limbs, out of my trees, thus exposing the whole interior to the sun and the air; this I think helped them, but I attribute my success more to the fact that the *grass and weeds were kept closely grazed by sheep*—which also ate all the young peaches as they fell, and thus relieved my entire orchard from the curculio for some years.

I have fourteen thousand peach trees, embracing thirty-three different sorts, from one year old to fifteen, and, from my experience, I think peach trees should be cultivated in the spring and the ground kept clear and loose until they are six years old; after that, they should be plowed and harrowed once each year, any time after the crop has been taken off—the later in the fall the better.

Sedum Sieboldii.

The London *Garden* calls attention to the beauty of Siebold's Stonecrop, when grown as a vase plant. The peculiar stony hue of the leaves and delicate rose of the blossoms which appear in autumn, makes it seem most happily placed when filling a small classic vase in an isolated position. In cold soils it often makes a very stunted growth; but, planted as above described, it grows to the height of a foot or more. For small baskets in the greenhouse it is also worth attention.

Gardens of Rentilly.

These gardens, illustrated in the frontispiece, are within the extended walls of Paris, and with their grand old forest trees, broad alleys, and superb statuary, are noted for their beauty and superior character.

The basins, fountains, and ornamental masonry surrounding these gardens, are constructed of the *Beton Coignet* stone, an artificial stone which, for these purposes, has been found far better than cut stone.

The walks, steps, balustrades, borders and statuary, are really one solid mass, without a joint or fissure, although they appear to have been constructed in the usual manner and with ordinary materials.

A Weeping Dogwood.

Mr. Meehan, in the *Gardener's Monthly*, thus refers to this unique tree, which was discovered by Dr. W. S. Thompson, of Baltimore county, in one of his rides:

We have seen a plant of the Weeping Dogwood (*Cornus Florida*), referred to by one of our advertisers, and can say that it is one of the most charming things we ever beheld. The branchlets are completely pendulous, and yet the leader manages to go straight up, so that it can be made very handsome as a specimen, even when worked low. In flower and fruit it must be a striking object, and then its dark leaves in fall would be as beautiful as the purple Beech in spring. It is unusual for a discoverer to offer the plant in this way. We suppose some amateur lover of rare trees will secure it; but perhaps good offers will come from some in the trade, who will be proud to be among the first to introduce so good a thing.

Horticulture in Southern California.

D. W. McLeod, of Riverside, San Bernardino county, California, writes to the *Pacific Rural Press*, of the wonderful fruitfulness of his section, in the following extravagant terms: Your subscriber from Cedar Rapids, Iowa, is right when he supposes we "have something in Riverside for which to thank God." Yes, we have to thank Him for a good climate, plenty of water, and a soil which will grow anything which is put into it, when well watered.

This morning I spent an hour in the orchard and vineyard of George Garcelon, Esq., and he showed me the work of two years. Many spots in the Eastern States could not, in one dozen years, show anything like the beauty of two years' growth. Eucalyptus, forty feet high; pepper trees spreading out their foliage; pears, peaches, apricots, quinces and almond trees, not three years old, in full bearing, and from two to four inches in diameter. Several fine varieties of figs, in the second year, from cuttings, produced a large crop. Lemons, limes, oranges, etc., all looking thrifty with large growth, but still too young to bear. He has eight varieties of grapes. One, the "Black Turkey," grows enormously. I lifted one cluster which weighed at least ten pounds. His Muscat Alexandria he made into raisins, equal to the best imported Malaga, and they averaged ten pounds of raisins to the vine in the second year.

To tell what has been done in Riverside would take more time than I have now at my command; and to say what *can* be done would be to put a limit upon willing hands, and the blessing of Providence upon the best soil in Southern California.

Land can be procured for from $30 to $40 per acre; water shares $10 extra to the acre, which gives a perpetual right to water; so that the owners of water stock only pay for what they use, in excess of the average. After eight years' sojourn in California, and visiting all of sixteen counties, I have come here to make my permanent home. I am satisfied with the change and say, to all in search of a home, "come and see Riverside before you settle."

The Beurre D'Anjou Pear.

Every year, when this pear begins to ripen up, we begin to feel our enthusiasm rising, and feel like seizing our pen, and exhorting everybody to indulge, if possible, in the luxury of eating this, we are almost ready to say, king of pears. We are now enjoying, upon our table, the Duchesse d'Angouleme, a pear decidedly inferior to d'Anjou, coarse-grained, of woody texture, slightly astringent, but still sweet, and better than most apples in eating condition at this season. The Fameuse apple, however, we prefer to the Duchesse pear, and as they generally appear upon our table together, we generally compare their qualities.

But to return to the Anjou; we keep them barreled up in a cool place, to retard their ripening up until the holidays. Last year we feasted upon them about that time, and our annual enthusiasm in their favor found vent in an article in our issue for January 2nd, in which we compared the merits of Duchesse, Beurre Deil, and the Anjou, and while we admitted that there might be more money in the former, for the market grower, we placed the latter far ahead in quality.

This year our ardor in favor of this pear is prematurely excited by a present of a half barrel from the nursery firm of Ellwanger & Barry, who excel quite as much in the production of fruit, as in the production of trees upon which the fruits grow. The pears are

remarkably large, smooth, sound and well ripened up, and as we enjoy their fine-grained, melting, buttery, sweet, aromatic flesh, we again wonder how any man owning an acre, or a small garden spot of land, can have the cruelty to deprive himself, and those dependent upon him for their food, of such a wholesome luxury, when it can be obtained at so small an outlay of money and labor.

We suppose that this great sin, of omitting to provide for his family such innocent enjoyment must be excused, as a great many other sins are excused—on the ground of ignorance. The sinner does not know how easy it is to plant, cultivate, prune and tend such trees; thinks they will blight, be wormy, scabby, or in some other way a failure, and so neglects to plant, and when the season of fruit comes around, sighs to think he must be excluded from the fruit-grower's paradise.

Pruning Hydrangeas.

The Hydrangea is cultivated and pruned in two different ways: for pot culture, and the training for out-door plants. The safest way to prune it for out-door culture is never to cut back one morsel of the young wood till it has done flowering, and then to cut it back entirely to the old wood; never to cut back the old wood until it gets too crowded, and then cut back to a promising young shoot; to thin out young shoots when they are three joints long, if they come much crowded, and not to allow suckers to grow from the roots on any account whatever. There is nothing differing in principle between pruning a Gooseberry-bush and a Hydrangea-bush; the old thumb-rule and the best rule for Gooseberry pruning is: "What you cut, cut clean out, and what you leave do not touch with the knife." But the drooping kinds of Gooseberries require some of the points of the young shoots to be cut back to prevent them from trailing too much on the ground. We all know that Hydrangeas should be planted in shady places.

Some curious experiments have been made in France to test how far the humidity of the atmosphere is affected by forests. Two sets of instruments for recording humidity were provided, one in a forest, and the other in the open air, a short distance off, each set being placed about fifty feet from the ground. The records show that during the first six months of 1874 more rain fell in the forest during each month than in the open field; the total rain-fall in the forest was 7½ inches, and in the open field a fraction less than seven inches. The difference each month was favorable to the forest.

Various Perfumes of Roses.

A writer in the London *Garden*, after remarking that Mignonette, Heliotrope, Verbena, Violet, Orange-blossoms, etc., has each its peculiar odor all the world over, speaks of the endless variety in the scents of the Rose, and he mentions seventeen distinct sorts, among which are the Sweetbrier scent, the Moss Rose scent, the Myrrh-scented Ayrshire, the China Rose, Damask Perpetual, Scotch Rose scent, Old Tea scent, etc. Another, termed the Verdier scent, and which takes in many newly introduced Roses, is compared to that of Apple blossoms, or perhaps more correctly to a delicate Rose scent, with a suspicion of turpentine about it, pleasantly blended. Roses give off more perfume after having been gathered a little while.

Fine Varieties of the Amaranth.

The first to be named is the *scarlet-leaved weeping Amaranth*, the *Amarante Melancholique* of French gardens. The whole of the leaves and stalks of this variety are of the richest crimson scarlet, so that the plant becomes highly ornamented as soon as the first leaves are developed. Masses of this plant may be made to produce a strikingly beautiful contrast with such as have foliage of a light vived green, with white or yellow flowers, or, in short, with any plants in which bright green tints predominate. In such situations, it may fitly replace the handsome Coleus Verschaffeltii, which requires the heat of a stove to bring it forward.

The seeds may be sown in an open border, or where fine early plants are required for bedding purposes, they should be sown upon

a partially exhausted hot bed in March or April, and planted out in May.

Another variety called by *A. bicolor*, by seedsmen, has the under part of the leaves cool crimson, while the upper surfaces are of a warm glowing crimson of very striking character, which, at a short distance, produces the effect of splended flowers.

A third grand variety, known as *A. tricolor*, produces an effect of a very different but equally splendid character. The leaves of this finely variegated plant are alternately red, green, or yellow, while many are beautifully marked with all three colors.

While so many costly novelties are run after with such avidity, it may be well to try back occasionally, and expend a few pence upon some seed-packets of recently improved varieties of Amcranths, although they may not be novelties of the current or even the last season.

The Lady Henniker.

This is the name of a new apple which is extensively advertised in England. The fruit is described as very large, roundish, narrowing a little towards the apex, with blunt angles on the sides, which terminate in prominent ridges round the eye; skin yellow on the shaded side, with a faint blush of red, which is covered with broken streaks of crimson on the side next the sun. Eye large, open, with short segments, and set in a very deep globular basin; stalk very short, set in a deep, wide, russety cavity; flesh very tender in the grain, well flavored, with a pleasant perfume. A first-rate apple, valuable as a cooking variety, useful also as a dessert fruit. Season, October to February.

Remarkable Preservation of Fruit.

At the Vienna Exhibition there were exhibited fresh apples, pears, etc., shipped and transported from *Victoria, New South Wales.* Mr. Casson, President of the Horticultural Society, at Victoria, gathered them carefully, and wrapped each fruit in clean unused tissue paper. A layer of dry cotton wool was then laid in an ordinary case, and on this a layer of apples in paper. More layers of cotton at side of case, and alternating with rows of apples, succeeded each other until the case was filled. The lid was nailed on in the usual manner, and the package was placed in the ice room of the steamer until landed. When unpacked, the fruit was found in fine condition, and excited both admiration and astonishment.

"The Blue Daisy."

Great prominence is given to the value of this flower by English gardeners, especially since it was flowered with success last summer on the rockwork at the Kew Gardens. It was imported by the expedition to Morocco, three years ago, of Dr. Hooker, Messrs. Maw and Ball. It was figured in the *Botanical Magazine* last year, where we are informed that the "Blue Daisy is one of the commonest spring flowers in various parts of Morocco, abounding in fields with a rich soil on the hills near Tangier, and occurring in great profusion by the watercourses of the valleys of the greater Atlas in latitude 31°, at elevations of 4,000 ft. to 11,000 ft." It flowers very profusely, and continues for a considerable time. The color is rather pale, but with some of the few who possess it the color has been bright. It does the best when planted on rockwork and is increased by careful division, preferably of plants in pots.

New Double Begonia.

Monsieur E. A. Carriere, the editor of the *Revue Horticole*, gives a most interesting account of a new hybrid seedling Begonia raised by M. Lemoine, of Nancy, which must be by far the finest and most beautful thing of the kind that has yet been seen. This fine novelty is the result of crossing Begonia Pearcei with B. Veitchi, and is to be sent out under the name of Begonia Monstruosa. It is also said to present features of exceptional and unusual interest to the botanist, as it produces both male and female flowers, the former only being double and of immense size and fullness, the latter single and comparatively insignificant. The color of the flowers is a brilliant flame-color, and they are most freely produced above handsome shining foliage. The plant is also almost hardy, and likely to prove a valuable acquisition.